

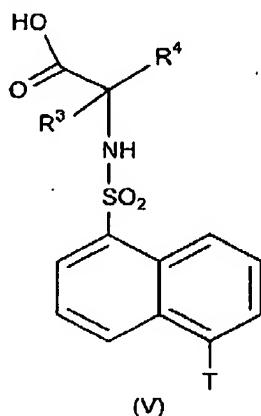
APPLICANT(S): ZIV, Ilan, et al.  
 SERIAL NO.: 10/560,747  
 FILED: December 15, 2005  
 Page 2

**AMENDMENTS TO THE CLAIMS**

Please cancel claims 1-46 and 55-64. Please add new claims 68-75 as follows.

Claims 1-46 (Cancelled)

47. (Currently Amended) A compound represented by a structure as set forth in formula (V):



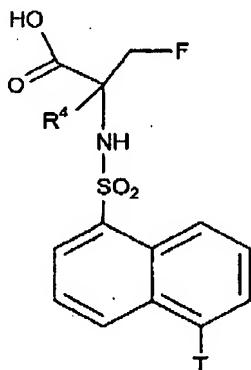
wherein T is  $-\text{OH}$ ,  $-\text{O}-\text{CH}_3$ ,  $-\text{O}-(\text{CH}_2)_y\text{CH}_3$ ,  $\text{NII}_2$ ,  $\text{N}(\text{CH}_3)_2$ ,  $\text{N}[(\text{CH}_2)_3\text{CH}_3]_2$ ,  $-\text{N}(\text{CH}_3)[(\text{CH}_2)_2\text{CH}_3]$ ,  $-\text{N}(\text{CH}_3)\text{CH}_2\text{CH}_3$  or  $-\text{N}(\text{CH}_3)[(\text{CH}_2)_3\text{CH}_3]$ ; y stands for an integer of 1, 2, or 3;

$\text{R}^3$  is hydrogen,  $(\text{CH}_2)_p-\text{OH}$ ,  $(\text{CH}_2)_p-\text{SH}$ ,  $(\text{CH}_2)_p-\text{F}$ , or a radical of  $\text{C}_1$ ,  $\text{C}_2$ ,  $\text{C}_3$ , or  $\text{C}_4$  carboxylic acid, wherein p is 1, 2, or 3; and

$\text{R}^4$  is hydrogen, a  $\text{C}_1$ ,  $\text{C}_2$ ,  $\text{C}_3$ ,  $\text{C}_4$ ,  $\text{C}_5$ ,  $\text{C}_6$  straight or branched alkyl, a  $\text{C}_1$ ,  $\text{C}_2$ ,  $\text{C}_3$ ,  $\text{C}_4$ ,  $\text{C}_5$ ,  $\text{C}_6$  straight or branched hydroxalkyl or a  $\text{C}_1$ ,  $\text{C}_2$ ,  $\text{C}_3$ ,  $\text{C}_4$ ,  $\text{C}_5$ ,  $\text{C}_6$  straight or branched fluoroalkyl.

APPLICANT(S): ZIV, Ilan, et al.  
 SERIAL NO.: 10/560,747  
 FILED: December 15, 2005  
 Page 3

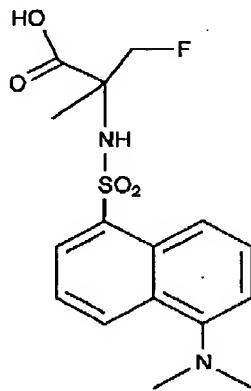
48. (Currently Amended) A compound according to Claim 47, represented by the structure as set forth in formula (VI):



(VI)

wherein T is as defined in Claim 47, and R<sup>4</sup> is hydrogen or a C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>, C<sub>4</sub>, C<sub>5</sub> or C<sub>6</sub> straight or branched alkyl, and wherein the F atom is <sup>18</sup>F or <sup>19</sup>F or ~~mixtures of fluorine isotopes~~ a mixture of fluorine isotopes.

49. (Currently Amended) A compound according to Claim 47, represented by the structure as set forth in formula (VII):

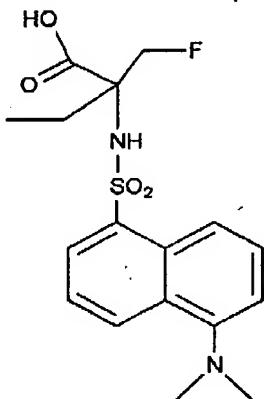


(VII)

APPLICANT(S): ZIV, Ilan, et al.  
SERIAL NO.: 10/560,747  
FILED: December 15, 2005  
Page 4

wherein the F atom is  $^{18}\text{F}$  or  $^{19}\text{F}$  or a mixture of fluorine isotopes.

50. (Currently Amended) A compound according to Claim 47, represented by the structure as set forth in formula (VIII):

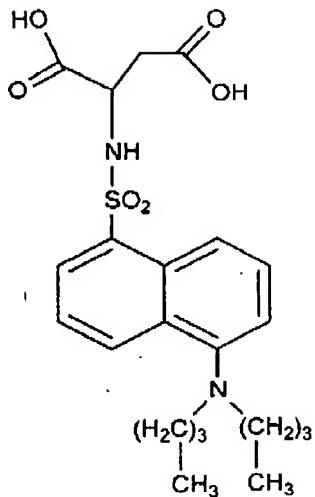


(VIII)

wherein the F atom is  $^{18}\text{F}$  or  $^{19}\text{F}$  or mixtures of fluorine isotope a mixture of fluorine isotopes.

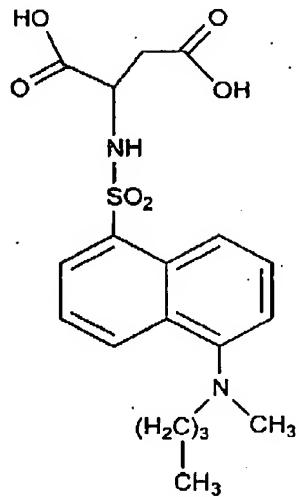
51. (Previously presented) A compound according to Claim 47 represented by the structure as set forth in formula (IX):

APPLICANT(S): ZIV, Ilan, et al.  
 SERIAL NO.: 10/560,747  
 FILED: December 15, 2005  
 Page 5



(IX)

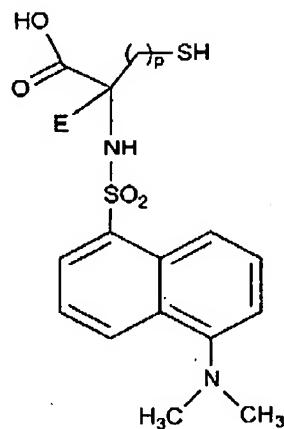
52. (Previously presented) A compound according to Claim 47, represented by the structure as set forth in formula (X):



(X)

APPLICANT(S): ZIV, Ilan, et al.  
 SERIAL NO.: 10/560,747  
 FILED: December 15, 2005  
 Page 6

53. (Previously presented) A compound according to Claim 47, represented by the structure as set forth in formula (XI):



(XI)

wherein E is C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub> or C<sub>4</sub> alkyl; C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub> or C<sub>4</sub> fluoroalkyl; or C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub> or C<sub>4</sub> hydroxyalkyl; p stands for an integer of 1 or 2.

54. (Previously presented) A compound according to Claim 53, wherein p is 1.

55 - 64 (Cancelled)

65. (Previously presented) A compound according to Claim 47 wherein said compound is being linked either directly or through a linker Y to a member selected from a solid support, a marker for imaging or a therapeutic drug, wherein said linker Y is C<sub>1</sub>, C<sub>2</sub>, C<sub>3</sub>, C<sub>4</sub>, C<sub>5</sub> or C<sub>6</sub> alkylene, 5-6 atom aromatic or 5-6 heteroaromatic ring, wherein the heteroatom of said heteroaromatic ring is N, O and S, a metal chelator, or combinations thereof.

APPLICANT(S): ZIV, Ilan, et al.  
SERIAL NO.: 10/560,747  
FILED: December 15, 2005  
Page 7

66. (Previously presented) An agent for the detection of PNOM-cells, comprising a compound according to claim 47, wherein said compound is linked or comprises a marker for imaging.

67. (Previously presented) An agent according to claim 66 wherein said marker for imaging is detectable by detector of color, fluorescence, X-ray, CT scan, MRI, radio-isotope scan, SPECT, or PET scan.

68. (New) A method for selective targeting of a chemical compound to a cell undergoing perturbation of the *normal organization* of its plasma membrane (PNOM-cell) present in a cell population, comprising the step of contacting the cell population with a perturbed membrane binding compound (PMBC), being a chemical compound represented by the structure set forth in formula (V) of Claim 47, thereby selectively targeting the chemical compound to the PNOM-cells within the cell population.

69. (New) A method of detecting the presence of PNOM-cells within a cell population selected from: a cell culture, a tissue in a human patient and a tissue in an animal, comprising the steps of:

- (i) administrating the cell population with a PMBC, or a conjugate comprising said PMBC and a marker for imaging, wherein said PMBC is represented by the structure set forth in formula (V) of Claim 47; and
- (ii) determining the amount of PMBC bound to cells in the cell population wherein a bound amount which is significantly higher than a control indicates the presence of PNOM-cells within the cell population.

70. (New) A method according to Claim 68, wherein the PNOM-cell is a cell undergoing a death process, an apoptotic cell or an activated platelet.

71. (New) A method for selective targeting of a PNOM-cell present in a cell population, comprising the step of:

APPLICANT(S): ZIV, Ilan, et al.  
SERIAL NO.: 10/560,747  
FILED: December 15, 2005  
Page 8

(i) contacting the cell population with a PMBC, or a conjugate comprising said PMBC and a marker for imaging, wherein said PMBC is represented by the structure set forth in formula (V) of Claim 47; and

(ii) determining the amount of PMBC bound to cells in said cell population, wherein a bound amount which is significantly higher than a control indicates the presence of said PNOM-cells within the cell population.

72. (New) A method for selective targeting of a chemical compound to a cell undergoing perturbation of the *normal organization* of its plasma membrane (PNOM-cell) present in a cell population, comprising the step of contacting the cell population with a perturbed membrane binding compound (PMBC), being a chemical compound represented by the structure set forth in formula (VIII) of Claim 50, thereby selectively targeting the chemical compound to the PNOM-cells within the cell population.

73. (New) A method of detecting the presence of PNOM-cells within a cell population selected from: a cell culture, a tissue in a human patient and a tissue in an animal, comprising the steps of:

(i) administrating the cell population with a PMBC, or a conjugate comprising said PMBC and a marker for imaging, wherein said PMBC is represented by the structure set forth in formula (VIII) of Claim 50; and

(ii) determining the amount of PMBC bound to cells in the cell population wherein a bound amount which is significantly higher than a control indicates the presence of PNOM-cells within the cell population.

74. (New) A method according to Claim 72, wherein the PNOM-cell is a cell undergoing a death process, an apoptotic cell or an activated platelet.

75. (New) A method for selective targeting of a PNOM-cell present in a cell population, comprising the step of:

APPLICANT(S): ZIV, Ilan, et al.  
SERIAL NO.: 10/560,747  
FILED: December 15, 2005  
Page 9

(i) contacting the cell population with a PMBC, or a conjugate comprising said PMBC and a marker for imaging, wherein said PMBC is represented by the structure set forth in formula (VIII) of Claim 50; and

(II) determining the amount of PMBC bound to cells in said cell population, wherein a bound amount which is significantly higher than a control indicates the presence of said PNOM-cells within the cell population.